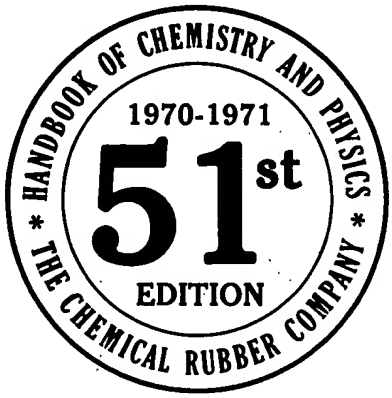
Handbook
OF
Chemistry and Physics

A Ready-Reference Book of Chemical and Physical Data



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Ref.	No.	Name	Synonyms and Formula	Mol. wt.	Color, crystalline form, specific rotation and λ_{max} (log ε)	m.p. °C	b.p. °C	Density	n_D	Solubility: w	al	eth	ace	bz	other solvents	Ref.
		Glycerol														
B31, 261	g74	—,1,3-diacetate	Diacetin. $HOCH(CH_2O_2CCH_3)_2$	176.17		40	280; 155–6[15]	1.1779[15]4	1.4395[20]	v	v	δ	...	...	CS_2 i	B2[2], 160
	g75	—,1,2-dibutanoate (*d*)	α,β-Dibutyrin. $C_3H_5CO_2CH_2CH(CH_2OH)O_2CC_3H_5$	232.28	$[\alpha]_D$ +1.7 (Py, c = 7)		273.5; 167[20]		1.4422[20]	i	s	...	...	...	...	B2, 273
B31, 264	g76	—,1,3-dido-decanoate	α,γ-Dilaurin. Glycerol-1,3-dilaurate. $HOCH[CH_2O_2C(CH_2)_{10}CH_3]_2$	456.72	pl (al), nd (eth-al) β: 56.5 (st)	α: 49.5 (unst) β: 56.5 (st)				...	s	s	...	s	chl, lig s	B2[2], 320
	g77	—,1,3-dihexa-decanoate	α,γ-Dipalmitin. Glycerol-1,3-dipalmitate. $HOCH[CH_2O_2C(CH_2)_{14}CH_3]_2$	568.93	cr (al or chl)	72–4 (α: 50 β: 63.5)				δ s[h]	s[h]	s	...	...	chl s[h]	B2[2], 968
B4[2], 910	g78	—,1,2-dimethyl ether(*dl*)	2,3-Dimethoxy-1-propanol*. $CH_3OCH_2CH(OCH_3)CH_2OH$	120.15			180[760]; 100[40]	1.016[25]4	1.4200[20]	∞	s	s	...	...		B1[3], 2317
B4[2], 911	g79	—,1,3-dimethyl ether	1,3-Dimethoxy-2-propanol*. $CH_3OCH_2CH(OH)CH_2OCH_3$	120.15			169[760]; 88[40]	1.0085[20]4	1.4192[20]	∞	v	s	...	...		B1[3], 2318
B4[2], 902	g80	—,1,3-dinitrate	$O_2NOCH_2CH(OH)CH_2ONO_2$	191.10	pr (w), cr (eth + 1w)	26 (hyd)	148[15]; 116[0.6]	1.523[25]4[D]	1.4715[20]4[D]	s	v	s	...	...		Bi[2], 591
	Ω g81	—,1,3-dioca-decanoate	α,γ-Distearin. Glycerol-1,3-distearate. $HOCH[CH_2O_2C(CH_2)_{16}CH_3]_2$	625.04	nd or pl (eth, chl, lig)	79.1				...	δ s[h]	δ s[h]	s[h]	...	os s[h]	B2[2], 356
B4[3], 1537	g82	—,1,3-diphenyl ether	$C_6H_5OCH_2CH(OH)CH_2OC_6H_5$	244.29	lf (al)	81–2	224.5[17.5]; 175[2]	1.179[24]4		i	v[h]	v	...	v	chl v	B6[2], 152
	g83	—,—,2-acetate	$CH_3CO_2CH(CH_2OC_6H_5)_2$	286.33	(dil al)	70–1	190[160]			i	v	v	...	v	chl v	B6, 149
B4[2], 911	g84	—,1,3-dipropanoate	α,γ-Dipropioin. $HOCH(CH_2O_2CCH_2CH_3)_2$	204.23			170–3[10]			...	s	...	...	...		B2[1], 107
	g85	—,1-hexadecyl ether	Chimyl alcohol. 3-Hexadecyl-oxy-1,3-propanediol. $HOCH_2CH(OH)CH_2O(CH_2)_{15}CH_3$	316.53	lf (hx) $[\alpha]_D^{25}$ 0 + 3 (chl)	64	120[0.005]			...	...	...	s	...	chl, peth s	H27, 674
B4[2], 946	g86	—,1(2-methoxy-phenyl) ether	Guaiacol α-glyceryl ether. Guaiamar.	198.22	rh pr (eth, eth-peth)	78.5–9	215[19]; 126–8[0.2]			s v[h]	v	...	...	s	chl s peth i	B6[1], 382
	g87	—,1-methyl ether	3-Methoxy-1,2-propanediol*. $HOCH_2CH(OH)CH_2OCH_3$	106.12	hyg liq		220[760] (198–200); 110–2[13]	1.1830[20]4	1.442[25]	v	v	s	v	...	os s	B1[3], 2317
B4[1], 550	g88	—,2-methyl ether	2-Methoxy-1,3-propanediol*. $HOCH_2CH(OCH_3)CH_2OH$	106.12	hyg liq		232[760]; 119–20[9]	1.124[25]4	1.4505[17]	v	v	s	v	...	os v	B1[3], 2317
B4[3], 1540	Ω g89	—,1-mono-acetate(*dl*)	α-Monoacetin. $HOCH_2CH(OH)CH_2O_2CCH_3$	134.13			158[165]; 129–31[3]	1.2060[20]4	1.4157[20]	s	s	δ	...	i		B2[2], 159
	g90	—,1-mono-butanoate(*dl*)	α-Monobutyrin. $HOCH_2CH(OH)CH_2O_2CCH_2CH_2CH_3$	162.19			269–71; 163[16]	1.129[18]	1.4531[20]	v	s	...	...	...		B2[2], 249
	g91	—,1-monodo-decanoate(*dl*)	α-Monolaurin. $HOCH_2CH(OH)CH_2O_2C(CH_2)_{10}CH_3$	274.41	lf (CCl_4 or peth)	α: 44 (unst) β′: 59.5 (unst) β: 63 (st)	186[1]	0.9248[97]	1.4350[86]	...	δ s[h]	v	v	s	chl v	B2[2], 320
	g92	—,—(*l*)	$HOCH_2CH(OH)CH_2O_2C(CH_2)_{10}CH_3$	274.41	cr (eth or peth) [α]$_D$ −4.9 (Py)	54–5				...	δ s[h]	v	v	s	chl v	B2[2], 890
B4[2], 931	g93	—,monohexa-decanoate(*dl*)	α-Monopalmitin. $HOCH_2CH(OH)CH_2O_2C(CH_2)_{14}CH_3$	330.51	pl or lf (eth, lig)	α: 66.5 (unst) β′: 74.6 (unst) β: 77 (st)				i	v	δ	...	...		B2[2], 338
	g94	—,—(*l*)	$HOCH_2CH(OH)CH_2O_2C(CH_2)_{14}CH_3$	330.51	cr (eth or peth) [α]$_D$ −4.37 (Py)	71–2				...	...	...	...	...		B2[2], 966
B1[1], 427	g95	—,1-mono(2-hydroxybenzoate)	Glycosal. α-Glyceryl salicylate.	212.21	nd (eth)	76				δ v[h]	v	δ	...	v[h]	chl, peth δ	B10[2], 53
B1[2], 888	g96	—,1-mono(12-hydroxy-9-octadecenoate)	Glycerol-1-monoricinoleate. α-Monoricinolein. $HOCH_2CH(OH)CH_2O_2C(CH_2)_7CH:CHCH_2CH(OH)(CH_2)_5CH_3$	372.55	ye			1.028[20]4		...	s	s	s	s	chl, AcOEt s lig, MeOH, CS_2 δ	B3[1], 138
B1[1], 427	g97	—,1-mononitrate	$HOCH_2CH(OH)CH_2ONO_2$	137.09	pr (w, al or eth)	61	155–60; 102[1]	1.4164[29]4	1.4698[20]	v	v	δ	...	...		B1[2], 591
B1[2], 889	g98	—,2-mononitrate	$HOCH_2CH(ONO_2)CH_2OH$	137.09	lf (w)	54	155–60	1.402[20]4		s	s	s	...	...		B1[2], 591
	g99	—,1-mono(9,12-octadecadienoate)	Glycerol-α-monolinoleate. α-Monolinolein. $HOCH_2CH(OH)CH_2O_2C(CH_2)_7CH:CHCH_2CH:CH(CH_2)_4CH_3$	354.54	cr (bz)	14–5			1.4758[20]	...	δ	v	...	v	chl v lig, MeOH, CS_2 δ	B2[1], 213
B1[3], 2297	Ω g100	—,1-monooca-decanoate(*dl*)	α-Monostearin. $HOCH_2CH(OH)CH_2O_2C(CH_2)_{16}CH_3$	358.57	pl (MeOH)	α: 74 (unst) β′: 79 (unst) β: 81 (st)		0.9841[20]4	1.4400[86]	i	δ s[h]	δ v[h]	...	...	lig s peth δ	B2[2], 354
B1, 519 B6[1], 99 B6[1], 101	g101	—,—(*l*)	$HOCH_2CH(OH)CH_2O_2C(CH_2)_{16}CH_3$	358.57	cr (eth or peth) [α]$_D$ −3.58 (Py)	76–7				...	...	...	...	...		B2[2], 1024

For explanations, symbols and abbreviations see beginning of table. For structural formulas see end of table.

No.	Name	Synonyms and Formula	Mol. wt.	Color, crystalline form, specific rotation and λ_{max} (log ε)	m.p. °C	b.p. °C	Density	n_D	Solubility: w	al	eth	ace	bz	other solvents	Ref.
	Glycerol														
g102	—,1-mono(9-octadecenoate)	Glycerol 1-monooleate. α-Monoolein. $HOCH_2CH(OH)CH_2O_2C(CH_2)_7CH:CH(CH_2)_7CH_3$	356.55	pl (al)	α: 25 (unst) β′: 32 (unst) β: 35.5 (st)	238–40[3]	0.9420[20]4	1.4626[40]	i	s	s	...	...	chl s	B2[2], 439
—	—,1-monooleate ..	*see* **Glycerol, 1-mono(9-octadecenoate)**													
—	—,1-monoricinoleate	*see* **Glycerol, 1-mono(12-hydroxy-9-octadecenoate)**													
Ω g103	—,1-octadecyl ether (*d*)	Batyl alcohol. 3-Octadecyloxy-1,2-propanediol*. $HOCH_2CH(OH)CH_2O(CH_2)_{17}CH_3$	344.59	pl (bz, ace) $[\alpha]_D^{20}$ +1.14 (chl, c = 6.6)	70–1	215–20[2]	.....	.....	i	s[h]	s	s[h]	s[h]	.....	B1[2], 590
g104	—,1-phenyl ether ..	Antodyne. $HOCH_2CH(OH)CH_2OC_6H_5$	168.20	nd (eth, peth or bz-lig)	67–8 (62–4)	200[22] 145–8[0.6]	1.225[20]4	.....	v	v	s[h]	...	v	peth δ con sulf s	B6[2], 152
g105	—,1(2-tolyl)ether ..	.....	182.22	nd (bz-peth)	70–1d (cor)	.....	.....	.....	δ	s	δ	...	...	.....	B6, 354
g106	—,triacetate	Triacetin. $CH_3CO_2CH(CH_2O_2CCH_3)_2$	218.21	cr (al)	4.1	258–60[760] 130.5[7]	1.1596[20]4	1.4301[20]	δ	∞	∞	v	∞	chl ∞ lig, CS_2 δ	B2[2], 160
g107	—,tribenzoate.....	Tribenzoin. $C_6H_5CO_2CH(CH_2O_2CC_6H_5)_2$	404.43	nd (MeOH)	76	.....	1.228[12]4	.....	i	s[h]	v	v	v	chl v	B9[2], 122
Ω g108	—,tributanoate....	Tributyrin. $CH_3CH_2CH_2CO_2CH(CH_2O_2CCH_2CH_2CH_3)_2$	302.37	.....	−75	305–10 (287–8) 190[15]	1.0350[20]4	1.4359[20]	i	s	v	s	s	.....	B2[2], 249
g109	—,tridodecanoate .	Glycerol trilaurate. Trilaurin. $CH_3(CH_2)_{10}CO_2CH[CH_2O_2C(CH_2)_{10}CH_3]_2$	639.03	nd (al)	α: 35.6 (unst) β: 32.9 (unst) β: 46.4 (st)	.....	0.8986[55]	1.4404[60]	i	s	s	v	v	chl, peth s	B2[2], 320
—	—,trielaidate.....	*see* **Glycerol, tri(*trans*-9-octadecenoate)**													
Ω g110	—,trihexadecanoate	Glycerol tripalmitate. Tripalmitin. $CH_3(CH_2)_{14}CO_2CH[CH_2O_2C(CH_2)_{14}CH_3]_2$	807.35	nd (eth)	α: 44.7 (unst) β: 56.6 (unst) β: 66.4 (st)	310–20	0.8752[70]4	1.4381[80]	i	δ	v	...	s v[h]	chl s	B2[2], 340
g111	—,trihexanoate ...	Glycerol tricaproate. Tricaproin. $CH_3(CH_2)_4CO_2CH[CH_2O_2C(CH_2)_4CH_3]_2$	386.54	.....	−60	> 200	0.9867[20]4	1.4427[20]	i	∞	∞	v	∞	peth, chl ∞	B2[2], 285
g112	—,tri(3-methylbutanoate)	Glycerol isovalerate. Triisovalerin. $(CH_3)_2CHCH_2CO_2CH[CH_2O_2CCH_2CH(CH_3)_2]_2$	344.45	.....	.....	330–5[763] 194[15]	0.9984[20]4	1.4354[20]	...	s	s	...	...	.....	B2[2], 277
g113	—,trimethyl ether..	1,2,3-Trimethoxypropane*. $CH_3OCH_2CH(OCH_3)CH_2OCH_3$	134.18	.....	.....	148	0.9460[15]4	1.4055[15]	∞	...	s	v	s	sulf v	B1[3], 2318
g114	—,trinitrate.....	Nitroglycerin. Trinitrin. $O_2NOCH_2CH(ONO_2)CH_2ONO_2$	227.09	pa ye tcl or rh	13 (st) 2 (unst)	256 exp 125[2]	1.5931[20]4	1.4786[12]	δ	s	∞	v	s	MeOH s CS_2, lig, peth δ chl v	B1[3], 2328
g115	—,trioctadecanoate.	Glycerol tristearate. Tristearin. $CH_3(CH_2)_{16}CO_2CH[CH_2O_2C(CH_2)_{16}CH_3]_2$	891.51	cr (eth, peth)	α: 55 β′: 64.5 β: 73	.....	0.8559[80]4	1.4399[80]	i	i	...	s	δ s[h]	CCl_4 δ, s[h] chl, CS_2 s AcOEt i lig, peth i, s[h]	B2[2], 1035
g116	—,tri(*cis*-9-octadecenoate)	Glycerol trioleate. Triolein. $CH_3(CH_2)_7CH:CH(CH_2)_7CO_2CH[CH_2O_2C(CH_2)_7CH:CH(CH_2)_7CH_3]_2$	885.47	polymorphic	α: −32 (unst) β′: −12 (unst) β: −5.5 (st)	235–40[18]	0.8988[40]	1.4621[40]	i	δ	v	...	...	chl, peth s	B2[2], 440
Ω g117	—,tri(*trans*-9-octadecenoate)	Glycerol trielaidate. Trielaidin. $CH_3(CH_2)_7CH:CH(CH_2)_7CO_2CH[CH_2O_2C(CH_2)_7CH:CH(CH_2)_7CH_3]_2$	885.47	.....	α: 16.6 β: 42.8	.....	.....	.....	i	δ	v	...	s	chl s	B2, 470
g118	—,trioctanoate....	Glycerol tricaprylate. Tricaprylin. $CH_3(CH_2)_6CO_2CH[CH_2O_2C(CH_2)_6CH_3]_2$	470.70	.....	9.8–10.1 (st) −21 (metast)	233.1	0.9540[20]4	1.4482[20]	i	∞	v	...	v	peth, lig, chl v	B2[2], 303
g119	—,tripropanoate ..	Tripropionin. Tripropin. $CH_3CH_2CO_2CH(CH_2O_2CCH_2CH_3)_2$	260.29	.....	.....	175–6[20] 130–2[3]	1.1002[20]18	1.4318[19]	i	s	v	...	...	chl s.	B2[2], 222
Ω g120	—,tritetradecanoate	Glycerol trimyristate. trimyristin. $CH_3(CH_2)_{12}CO_2CH[CH_2O_2C(CH_2)_{12}CH_3]_2$	723.19	polymorphic (al-eth)	α: 32 (unst) β: 44 (unst) β′: 56.5 (st)	311	0.8848[80]4	1.4428[60]	i	δ	s	s	s	chl s lig, CS_2 δ	B2[2], 328
—	—,1,2-dithio-.....	*see* **1-Propanol, 2,3-dimercapto-**													

No.	Name	Syn
	Glycerophosph	**ric a**
g121	Glycerophosphoric acid(*L*)	HOCH
—	Glycidic acid	*see* Pro epoxy
g122	Glycidol(*d*)	2,3-Ep Glyci propy
g123	—(*l*).....	C_3H_6O
Ω g124	Glycine	Amino H_2N
g125	—,amide	Glycin H_2N
g125[1]	—,—,*N*′(4-ethoxyphenyl)-	Glycin Phen
g126	—,—,hydrochloride	H_2NC
—	—,anhydride.....	*see* 2,5
g127	—,ethyl ester.....	Ethyl H_2N
Ω g128	—,—,hydrochloride	H_2NC
g129	—,hydrochloride ..	H_2NC
g130	—,methyl ester	Methy H_2N
g131	—,nitrile	Amin H_2N
g132	—,*N*(*p*-acetamidophenyl)-	.....
Ω g133	—,*N*-acetyl-	Aceta Acet CH_3
g134	—,*N*-acetyl-*N*-phenyl-	*N*-Ph CH_3
g136	—,*N*(4-aminophenyl)-, monohydrate	C_8H_1
g137	—,*N*(2-arsonophenyl)-, amide	.....
g138	—,*N*(3-arsonophenyl)-, amide	.....
—	—,*N*-benzoyl-	*see* H
g142	—,*N*-benzyl-	.....
Ω g143	—,—,ethyl ester ...	$C_{11}H$
Ω g144	—,*N*,*N*-bis(2-hydroxyethyl)-	(HOC
g145	—,*N*-bromoacetyl-*N*-phenyl-	BrCH
Ω g148	—,*N*(2-carboxyphenyl)-	*N*-Ca acid acid
g149	—,*N*-chloroacetyl-*N*-phenyl-	ClCH
g150	—,—,methyl ester .	ClCH
—	—,cholyl-.....	*see* G
g151	—,*N*,*N*-dicarbethoxy-, ethyl ester	$(C_2H$
g153	—,—,nitrile.....	Dieth $(C_2I$
g154	—,*N*,*N*-dimethyl- ..	Dime (CH
g155	—,—,nitrile.....	Dime (CH
g156	—,*N*-ethyl-	Ethy C_2H
g157	—,—,nitrile.....	Ethy C_2H
g158	—,*N*-formyl-*N*-phenyl-	C_6H_5

For explanations, symbols and abbreviations see beginning of table. For structural formulas see end of table.

No.	Name	Synonyms and Formula	Mol. wt.	Color, crystalline form, specific rotation and λ_{max} (log ε)	m.p. °C	b.p. °C	Density	n_D	Solubility: w	al	eth	ace	bz	other solvents	Ref.
	Laudanosine (*d*)														
121	Laudanosine(*d*)	*N*-Methyltetrahydropapaverine. $C_{21}H_{27}NO_4$.	357.46	nd (peth), pr (al) $[\alpha]_D^{16}$ +106 (al, c = 1.6) λ^{MeOH} 231 (4.20), 282 (3.78)	89				i	s	s	s	s[A]	chl s	B21[2], 184
122	—(*dl*)	$C_{21}H_{27}NO_4$. *See* 121	357.46	nd (al)	115–6										
123	—(*l*)	$C_{21}H_{27}NO_4$. *See* 121	357.46	cr (al) $[\alpha]_D^{15}$ −105.4 (al, c = 3)	89				i	v[A]	s	s	s	chl v peth δ[A]	B21[2], 185
—	Lauramide	*see* Dodecanoic acid, amide*													B21[2], 185
124	Laureline	$C_{19}H_{19}NO_3$	309.35	ta (al) cubes (peth) $[\alpha]_D^{18}$ −99 (abs al, c = 0.7) λ 350 (1.8), 394 (1.65)	114 (97)				i	s	s			dil ac s con sulf s→red	B27[1], 461
—	Lauric acid	*see* Dodecanoic acid*													
—	Laurone	*see* 12-Tricosanone*													
—	Laurophenone	*see* 1-Dodecanone, 1-phenyl-													
—	Lawsone	*see* 1,4-Naphthoquinone, 2-hydroxy-*													
—	Lawsone anilide	*see* 1,4-Naphthoquinone, 2(phenylamino)-*													
125	Lecithin	α(Dimyristoyl)lecithin	677.92	$[\alpha]_D^{24}$ +7.0	236–7										
126	Ledol		222.38	nd (al) $[\alpha]_D^{20}$ +28 (chl, c = 10) $[\alpha]_D^{20}$ +7.98 (al)	105–6.5 δsub	292[760] (282–3) with sub	0.9094$_{10}^{100}$	1.4667[110]	i δ[A]	s v	s s	i s	δ s	chl s peth s oos s	Am 74, 158 E13, 5
—	Lepidine	*see* Quinoline, 4-methyl-													
—	*p*-Leucaniline, *N,N,N',N'*-tetramethyl-	*see* Methane, bis(4-dimethylaminophenyl)(4-amino phenyl)-*													
—	Leucaurine	*see* Methane, tris(4-hydroxyphenyl)-*													
—	Leucenol	*see* Mimosine													
127	Leucic acid(*D*)	4-Hydroxy-4-methylvaleric acid. Leucinic acid. $(CH_3)_2CHCH_2CHOHCO_2H$	132.16	nd (bz), pr (eth-peth) $[\alpha]_D^{125}$ +10.7 (w, c = 5) $[\alpha]_D^{18}$ +26.1 (1N NaOH, c = 2)	80–1										B3[2], 233
128	—(*DL*)	$(CH_3)_2CHCH_2CHOHCO_2H$	132.16	pl (eth-peth)	77				v	v	v				B3[2], 234
129	—(*L*)	$(CH_3)_2CHCH_2CHOHCO_2H$	132.16	rh (eth) $[\alpha]_D^{20}$ −11.3 (w, c = 1)	81–2	<100			v	v	v				B3[2], 233
130	Leucinamide(*dl*)	α-Aminoisocaproamide. $(CH_3)_2CHCH_2CH(NH_2)CONH_2$	130.19	pr (bz)	106–7				s	v		v	δ		B4, 448
131	Leucine(*D*)	*D*-α-Aminoisocaproic acid. $(CH_3)_2CHCH_2CH(NH_2)CO_2H$	131.18	pl (al) $[\alpha]_D^{20}$ +10.34	293 sealed tube	sub			δ						B4, 446
132	—(*DL*)	$(CH_3)_2CHCH_2CH(NH_2)CO_2H$	131.18	lf (w) $\lambda^{w,pH=1}$ 207 (1.82)	293–5 sealed tube (332d)	sub	1.293$_4^{18}$		s	δ	i				B4[2], 870
133	—(*L*)	$(CH_3)_2CHCH_2CH(NH_2)CO_2H$	131.18	hex pl (dil al) $[\alpha]_D^{25}$ −10.42 (w, p = 22) $[\alpha]_D^{25}$ +17.3 (20% HCl)	293–5 sealed tube	sub	1.293$_4^{18}$		δ	i	i				B4[2], 859
—	—amide	*see* Leucinamide													
134	—,*N*-acetyl-(*dl*)	$(CH_3)_2CHCH_2CH(NHCOCH_3)CO_2H$	173.21	nd (dil al) $\lambda^{w,pH=1}$ 215 (2.8)	161				v	δ					B4, 451
135	—,*N*-benzoyl-(*dl*)	$(CH_3)_2CHCH_2CH(NHCOC_6H_5)CO_2H$	235.29	nd (dil al)	137–41				s	s	s		δ	chl s lig i	B9, 253
136	—,*N*-glycyl-(*dl*)	$(CH_3)_2CHCH_2CH(NHCOCH_2NH_2)CO_2H$	188.23	tetr (dil al)	242d		1.181		v	i					B4, 453
137	—(*l*)	$(CH_3)_2CHCH_2CH(NHCOCH_2NH_2)CO_2H$	188.23	pl (dil al) $[\alpha]_D^{20}$ −35.2 (w)	256d				v	i					Am 74, 3818
—	Leuco indigo	*see* Indigo white													

[A] Explanations, symbols and abbreviations see beginning of table. For structural formulas see end of table.